POLARIS
The Way Out.

THE NEW AMERICAN MOTORCYCLE™

2002–2004

VICTORY

SERVICE MANUAL

P/N 9918960

CLASSIC CRUISER

TOURING CRUISER

THE NEW AMERICAN MOTORCYCLE™

POLARIS®
The Way Out.

2002 - 2004 SERVICE MANUAL

Part Number 9918960

Foreword

This manual is designed primarily for use by Victory service technicians in a properly equipped shop and should be kept available for reference in the shop area. All references to left and right side of the motorcycle are from the operator's perspective when seated in a normal riding position.

Some procedures outlined in this manual require a sound knowledge of mechanical theory, tool use, and shop procedures in order to perform the work safely and correctly. Read the text and be familiar with the service procedures before starting the work. Certain procedures will require the use of special tools. Use only the proper tools as specified.

This manual includes procedures for maintenance, component identification and repair, along with service specifications for Victory Classic Cruiser and Touring Cruiser motorcycles. Comments or suggestions about this manual may be directed to: Service Publications Dept. @ Polaris Sales Inc. 2100 Hwy 55 Medina, Minnesota 55340.
2002 - 2004 Victory Standard, Deluxe, Classic, and Touring Cruiser Service Manual PN9918960.

Refer to page 1.6 for Owner's Manual, Parts Book, and Microfiche part numbers.

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CHAPTER 1

GENERAL

1

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TRADEMARKS

Victory acknowledges the following products mentioned in this manual:

FLEXLOC, Registered Trademark of SPS Technologies
Loctite, Registered Trademark of the Loctite Corporation
STA-BIL, Registered Trademark of Gold Eagle
FOX, Registered Trademark of Fox Shocks
Nyogel, Trademark of Wm. F. Nye Co.
Fluke, Registered Trademark of John Fluke Mfg. Co.
Mity Vac, Registered Trademark of Neward Enterprises, Inc.
Torx, Registered Trademark of Textron

UNDERSTANDING SAFETY LABELS & INSTRUCTIONS

DANGER, WARNINGS, & CAUTION SYMBOLS

⚠ This is the safety alert symbol. When you see this symbol on your machine or in this manual, be alert to the potential for personal injury. Your safety is involved!

⚠WARNING

Indicates a potential hazard which could result in severe injury or death.

⚠CAUTION

Indicates a potential hazard which may result in minor personal injury or damage to the motorcycle.

CAUTION

Indicates a situation that can result in damage to the motorcycle.

NOTE:

The word "NOTE:" in this manual will alert you to key information or instructions.

⚠WARNING

Gasoline is extremely flammable and explosive under certain conditions.

- Always stop the engine and refuel outdoors or in a well ventilated area.
- Do not smoke or allow open flames or sparks in or near the area where refueling is performed or where gasoline is stored.
- Do not overfill the tank. Do not fill the tank neck above the fuel tank insert. Leave air space to allow for fuel expansion.
- If you get gasoline in your eyes or if you swallow gasoline, see your doctor immediately. Never try to syphon gasoline using mouth suction.
- If you spill gasoline on your skin or clothing, immediately wash it off with soap and water and change clothing.
- Never start the engine or let it run in an enclosed area. Engine exhaust fumes are poisonous and can cause loss of consciousness or death in a short time.

⚠WARNING

The engine exhaust from this product contains chemicals known to cause cancer, birth defects or other reproductive harm.

⚠WARNING

Improper repairs or service can create unsafe conditions that may cause severe personal injury or death.

⚠WARNING

The engine and exhaust components on this product become very hot during operation and remain so for a period of time after the engine is stopped.

⚠WARNING

Never run the engine in an enclosed area without a properly functioning exhaust gas evacuation system connected to the product.

⚠WARNING

Modifications to this motorcycle not approved by Victory may cause loss of performance, excessive emissions, and make the machine unsafe for use.

⚠WARNING

Brake fluid is poisonous.
KEEP OUT OF REACH OF CHILDREN.

⚠WARNING

Wear insulated protection for hands and arms or wait until hot components have cooled sufficiently before working on the product.

⚠WARNING

Brake fluid is poisonous. Do not ingest or allow brake fluid to contact eyes. Always wear eye protection when working with brake fluid.

⚠WARNING

Battery electrolyte is poisonous. It contains sulfuric acid. Serious burns can result from contact with skin, eyes or clothing.

CAUTION

Brake fluid will damage plastic, painted and rubber parts. Protect these surfaces whenever the brake system is being serviced.

SERVICE RULES

In order to perform service work efficiently and prevent costly errors, technicians should read the text in this manual and familiarize themselves with the procedures before beginning. Photographs and illustrations have been included with text as an aid. Notes, Cautions and Warnings have also been included for clarification of text and safety concerns. Knowledge of mechanical theory, tool use and shop procedures are necessary to perform some procedures in this manual safely and correctly.

⚠ Use only genuine Victory service parts.

⚠ Cleanliness of parts and tools as well as the work area is of primary importance. Dirt and foreign matter will act as an abrasive and cause damage to precision parts. Clean the motorcycle before beginning service. Clean all parts before installing.

⚠ If difficulty is encountered in removing or installing a component, look to see if a cause for the difficulty can be found. If it is necessary to tap the part into place, use a soft face hammer and tap lightly.

⚠ Always follow torque specifications as outlined throughout this manual. Incorrect torquing may lead to serious machine damage or in the case of steering, driveline, and chassis components, can result in loss of control during operation of the motorcycle, resulting in injury or death.

⚠ If a torquing sequence is indicated for nuts, bolts or screws of a certain component, start all fasteners in their holes and hand tighten. Following the method and sequence indicated, tighten evenly to the specified torque value. When removing nuts, bolts or screws from a component with several fasteners, loosen them all about 1/4 turn before removing them to prevent distortion of that component.

⚠ If the condition of any gasket or o-ring is in question, replace it with a new one. Be sure the mating surfaces for the gasket are clean and smooth to avoid leaks and maintain specified tolerances.

⚠ Some procedures require removal of retaining rings or clips. Removal can weaken and deform these parts, therefore, they should always be replaced with new parts. When installing new retaining rings and clips, use care not to expand or compress them beyond what is required for installation.

⚠ Because removal damages seals, always replace with new seals during a repair.

⚠ Victory lubricants and greases have been specially formulated to provide maximum performance and protection when applied properly. In some applications, warranty coverage may be void if improper lubricants are used.

⚠ Parts requiring grease should be cleaned thoroughly and fresh grease applied before reassembly. Deteriorating grease loses lubricity and may contain abrasive foreign matter.

⚠ WARNING

Working with Batteries

- When removing or installing batteries, care should be taken to avoid the possibility of explosion resulting in serious burns. Remove battery from the motorcycle before charging. Keep battery away from the source of any combustion (sparks, fire, etc..) when charging.
- Always disconnect the negative (black) cable first and reconnect it last.
- Battery electrolyte contains sulfuric acid and is poisonous! Serious burns can result from contact with skin, eyes or clothing.
- **IN THE EVENT OF CONTACT WITH SULFURIC ACID: External** - Flush with water. **Internal** - Drink large quantities of water or milk. Follow with milk of magnesia, beaten egg, or vegetable oil. Call for medical attention immediately.
- **Eyes** - Flush with water for 15 minutes and call for medical attention immediately.

VICTORY TOUCH-UP AND REFINISHING PAINT

Service Paint products are available in three different sizes and applications. Some paint colors require up to 3 components to create a color. Prices subject to change without notice. Dealer is responsible for freight on paint and paint products.

.6 ounce bottle: (Order Multiple of 2) For brush touch-up of small nicks.

10 ounce aerosol can: (Order Multiple of 2)
Apply light even coats for best results. Recoat time is from 30-60 minutes or after 4 days of drying to prevent lifting.

Quarts: (Sold as each)
For repaint of properly prepared plastic components or metal substrates.
Paint is a high quality acrylic urethane manufactured by U.S. Paint.
Mix as indicated on back of paint can. Paint can be recoated after paint is tack free or has "flashed off".
Paint finish may be wet sanded and buffed after coating has cured.
Paint is available in a variety of sizes and styles for specific painting needs:

How to order:

Place your order via the dealer web site at : www.polarisdealers.com
Phone Customer Service: 1-800-330-9407
Fax your paint order to 1-866-245-7533 using the supplied paint order form.
Prices subject to change without notice.

Please have your dealer number, telephone number, and Polaris part # to give to the Customer Service Specialist, or include on the order form. Additional charges may apply for phoned in orders.

Note: There will be a 25% service fee charged for all returns. Polaris dealer will be responsible for return freight.

VICTORY DETAIL AND FINISH RESTORER KITS

A Detail Kit (polish, wax, and dressing) and a Restore Kit (Polish, Swirl, and Scuff remover) is available from the Victory parts department for painted surface protection and to remove minor surface imperfections.

Detail Kit: 2872195 **Restore Kit: 2872192**

VICTORY PAINT COLORS BY MODEL

NOTE: The 8th Position in the model number is a letter that designates the country / region:

C=Canada; D=49State; L=California; U=United Kingdom

The last letter is the color designator. Refer to the chart below for model / color. Paint ordering information is available on the dealer web site.

MODEL YEAR 2002

Model Number	Model	Description / Color	Model Number	Model	Description / Color
V02CB16CC,DC,LC,UC	Std. Crsr.	Cruiser Black	V02TB16CC, DC, LC, UC	TC	Cruiser Black
V02CB16CK,DK,LK,UK	Std. Crsr.	Solar Red / Stone White	V02TB16CO, DO, LO, UO	TC	Solar Red / Vogue Silver
V02CB16CL,DL,LL,UL	Std. Crsr.	Speed Yellow / Crs Black	V02TB16CP, DP, LP, UP	TC	Sonic Blue / Vogue Silver
V02CD16CC,DC,LC,UC	Dlx. Crsr.	Cruiser Black	V02TD16CC, DC, LC, UC	TC Dlx.	Cruiser Black
V02CD16CK,DK,LK,UK	Dlx. Crsr.	Solar Red / Stone White	V02TD16CO, DO, LO, UO	TC Dlx.	Solar Red / Vogue Silver
V02CD16CL,DL,LL,UL	Dlx. Crsr.	Speed Yellow / Crs Black	V02TD16CP, DP, LP, UP	TC Dlx.	Sonic Blue / Vogue Silver
V02CD16CM,DM,LM,UM	Dlx. Crsr.	Sonic Blue / Pearl White	V02TD16CQ, DQ, LQ, UQ	TC Dlx.	Cruiser Black/Vogue Silver
V02CD16CN,DN,LN,UN	Dlx. Crsr.	Cobalt Green / Pearl White	V02TD16CR, DR, LR, UR	TC Dlx.	Champagne / Pearl white

MODEL YEAR 2003

Model Number	Model	Description / Color	Model Number	Model	Description / Color
V03C116 / V03C216	Classic	Feature / Option	V03T116 / V03T216	TC	Feature / Option
V03CB16CA, DA, LA, UA	Classic	Cruiser Black	V03TB16CA, DA, LA, UA	TC	Cruiser Black
V03CB16CB, DB, LB, UB	Classic	Sonic Blue	V03TB16CB, DB, LB, UB	TC	Sonic Blue
V03CB16CC, DC, LC, UC	Classic	Solar Red	V03TB16CC, DC, LC, UC,	TC	Solar Red
V03CB16CD, DD, LD, UD	Classic	Flame Yellow			

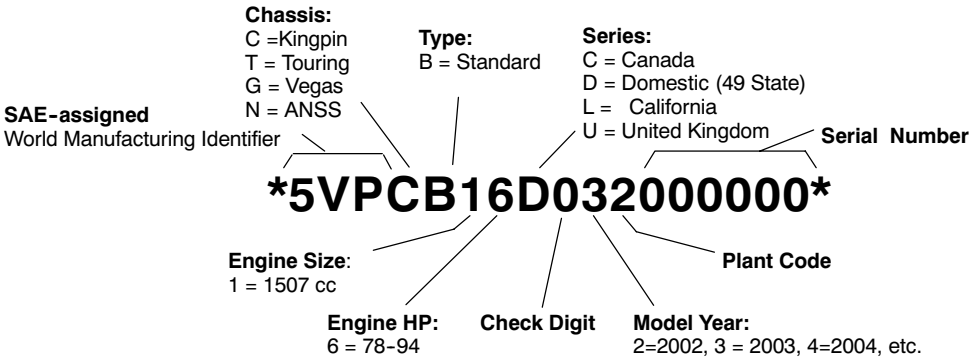
MODEL YEAR 2004

Model Number	Model	Description / Color	Model Number	Model	Description / Color
V04T118	Touring	Feature / Option	V04TB16CB, DB, LB	Touring	Sonic Blue
V04TB16CA, DA, LA	Touring	Cruiser Black	V04TB16CC, DC, LC	Touring	Solar Red

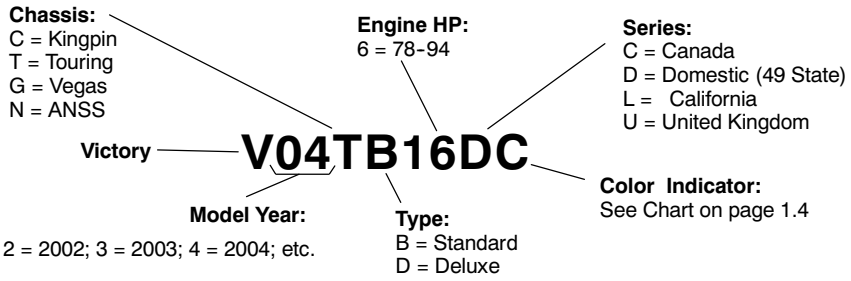
VICTORY PAINT CODES

PAINT COLORS	PAINT CODE	PAINT COLORS	PAINT CODE
Cruiser Black (PHAT)	P-266	Pearl White	P-352
Indy Red	P-293	Cobalt Green	P-353
Steel Grey	P-302	Vogue Silver	P-354
Speed Yellow	P-323	Champagne	P-355
Sparkle Grey (Fork Legs, Triple Clamp)	P-339		
Sonic Blue	P-341	Flame Yellow	P-388
Solar Red	P-342	Retro Turquoise	P-389
Stone White	P-351	Daytona Orange	P-393
Flame Tank (All Years) paint codes are made up of Indy Red, Stone White, Speed Yellow, and Daytona Orange			

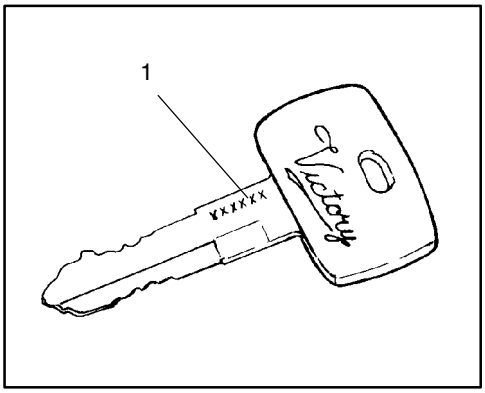
VEHICLE IDENTIFICATION NUMBER



MODEL NUMBER



IGNITION KEY IDENTIFICATION NUMBERS

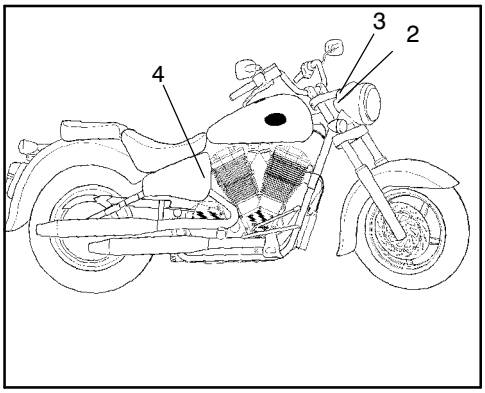


The key identification number (1) is stamped on the key tag. If the key and the identification number are lost or misplaced, the lock set (ignition switch, seat lock (where applicable), and steering lock) must be replaced.

Key blanks are available from service parts. Locksmiths familiar with the motorcycle industry will be able to cut a replacement key with the key I.D. number and a VIctory key blank.

Should the keys and key identification number become lost, the ignition switch must be replaced.

VEHICLE IDENTIFICATION NUMBER (VIN)



The vehicle identification number (2) is stamped on the front of the steering head.

MODEL IDENTIFICATION NUMBER

The model label (3) is located on the left side of the steering head.

ENGINE NUMBER DECAL

The engine label (4) is located on top of the crankcase behind the rear cylinder. This label identifies the engine model and serial number. The engine serial number is also stamped on the crankcase just to the right of the oil filter.

BREAK-IN PROCEDURES

There is never a more important period in the life of a new Victory motorcycle than the period between zero and 500 miles (805 km). A Victory motorcycle is manufactured using the best possible materials and manufacturing techniques, but the final machining process is the break-in. During break-in period, many parts in the engine wear and polish to correct operating clearances. During this time, the operator should:

- **Avoid prolonged full throttle operation.**
- **Avoid operation which might result in excessive heating of the engine.**

The general break-in guidelines are as follows:

BREAK-IN GUIDELINES		
Miles/km	**Throttle Position**	**Notes**
0-90 miles	0-1/3	Avoid prolonged operation above 1/3 throttle. Stop engine and let it cool following every hour of operation. Vary speed of motorcycle. Do not operate machine at one set throttle position.
90-300 miles	0-1/2	Avoid prolonged operation above 1/2 throttle. Stop engine and let it cool following every hour of operation. Vary speed of the motorcycle. Do not operate machine at one set throttle position.
300-500 miles	0-3/4	Avoid cruising speeds above 3/4 throttle.
500 miles	***Replace the engine oil and engine oil filter.*** Have Victory dealer perform 500 mile service on the machine. See chapter 2 for more information.	
500 +	Avoid prolonged full-throttle operation. Vary the engine speed occasionally. Follow the pre-ride inspection outlined in the owner's manual.	

PUBLICATION PART NUMBERS

The following chart lists the part numbers for Owner's Manuals, parts books, and parts microfiche.

OTHER VICTORY PUBLICATIONS			
Year / Model	**Publication Part Numbers U.S. and (Canada)**		
	Owner's Manual	**Parts Book**	**Microfiche**
2002 Standard Cruiser	9917169 (Can 9917170)	9917632	9917633
2002 Deluxe Cruiser	9917169 (Can 9917170)	9917630	9917631
2002 Touring Cruiser	9917171 (Can 9917172)	9917628	9917629
2002 Deluxe Touring Cruiser	9917171 (Can 9917172)	9917634	9917635
2003 Classic Cruiser	9918229 (Can 9918230)	9918364	9918365
2003 Touring Cruiser	9918229 (Can 9918230)	9918366	9918367
2004 Touring Cruiser	9918946 (Can 9918947)	9918952	9918953

EMISSION CONTROL SYSTEMS

The U.S. Environmental Protection Agency and California Air Resources Board (CARB) require manufacturers to certify that their motorcycles comply with applicable exhaust emissions standards during their useful life, and that motorcycles built after January 1, 1983 comply with applicable noise emission standards for one year or 6,000 km (3,730 mi) after the time of sale to the ultimate purchaser, when operated and maintained according to the instructions provided.

EMISSION SOURCES

An internal combustion engine produces carbon monoxide and hydrocarbons during operation. Hydrocarbons must be controlled because under some conditions hydrocarbons react with sunlight to produce photochemical smog. Carbon monoxide must be controlled because it is toxic.

EXHAUST EMISSION CONTROL

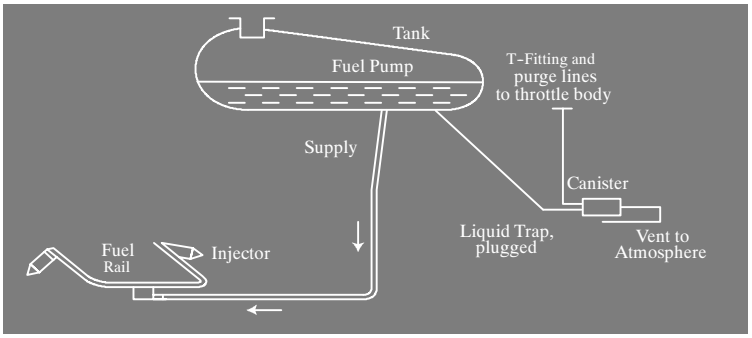
Victory Motorcycles utilizes an electronic engine management system which controls fuel delivery and ignition timing to control hydrocarbons and carbon monoxide. No adjustments should be made to the system. If components are replaced that affect idle speed follow the instructions in Chapter 5.

CRANKCASE EMISSION CONTROL

The crankcase emission control system is comprised of a closed system that routes crankcase emissions through the air cleaner into the combustion chamber.

EVAPORATIVE EMISSION CONTROL CONTROL (CA MODELS)

A vacuum hose connects the purge port manifold to the charcoal canister. Evaporated fuel vapor passes from the fuel tank, along the vent hose , and to the charcoal canister. Activated charcoal in the canister filters the regulated elements of the vapor for storage until the engine is started and the motorcycle is driven. The canister and liquid trap are cleaned as part of the engine's ordinary combustion cycle. Inspect the evaporative control system clamps, hoses, fittings, canister and other hardware for wear or damage during each maintenance period of the motorcycle. Refer to the owner's manual for emission system warnings and instructions.



NOISE EMISSION CONTROL SYSTEM

Tampering with Noise Control Systems is Prohibited. Federal law prohibits the following acts or causing thereof:

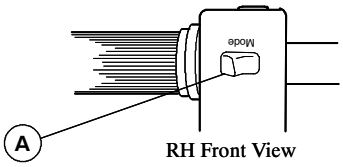
1. The removal or rendering inoperative by any person other than for purposes of maintenance, repair or replacement, any device or element of design incorporated into the motorcycle for the purpose of noise control prior to its sale or delivery to the ultimate purchaser or while it is in use, or
2. The use of the motorcycle after such device or element of design has been removed or rendered inoperative.

Among those acts presumed to constitute tampering are the acts listed below:

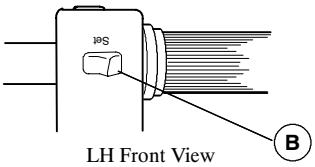
1. Removal of, or puncturing the muffler, baffles, header pipes or any other component which conducts exhaust gases.
2. Removal or puncturing of any part of the intake system.
3. Lack of proper maintenance.
4. Replacing any moving part of the motorcycle or parts of the exhaust / intake system with parts other than those specified by the manufacturer.

Multi-Function Display (MFD) Modes and Operation

The MFD lets the user toggle via the mode button to view the odometer, the trip odometer, the clock, the fuel gauge, the voltmeter, the instrument cluster light dimmer, the headlamp high beam indicator light dimmer, and the check engine indicator. The MFD operates only when the ignition switch is in the **On** position. To select the desired function, press the MFD **Mode** button (A). To adjust a particular function, press the MFD **Set** button (B).



RH Front View



LH Front View

Odometer

The odometer is the default mode of the MFD after starting the engine and displays the total miles traveled.

To toggle the odometer and trip odometer reading between miles / kilometers, and the fuel gauge reading between gallons / liters, the ignition switch must be in the **On** position with the MFD in odometer mode. Press and hold the MFD **Set** button for 3 seconds.

To change to the next MFD function, press the MFD **Mode** button.

Trip Odometer

"TRIP" appears as part of the display when in trip odometer mode. The trip odometer shows total miles traveled since the trip odometer was reset. You can use the trip odometer to calculate the miles per gallon and estimate the number of miles traveled on a tank of fuel.

To reset the trip odometer, the ignition switch must be in the **On** position with the MFD in trip odometer mode. Press and hold the MFD **Set** button for 3 seconds.

To change to the next MFD function, press the MFD **Mode** button.

Clock

A clock icon appears as part of the display when in clock mode. When the clock is operating normally, the colon between the hour and minutes flashes.

To set the clock, the ignition switch must be in the **On** position with the MFD in clock mode.

1. Press and hold the MFD **Set** button for 3 seconds when in clock mode. The hour digits should flash.
2. Press the MFD **Set** button to select the desired hour.
3. Press the MFD **Mode** button to accept the new hour setting. The ten-minute digit should flash.
4. Press the MFD **Set** button to select the desired ten-minute.
5. Press the MFD **Mode** button to accept the new ten-minute setting. The minute digit should flash.
6. Press the MFD **Set** button to select the desired minute.
7. Press the MFD **Mode** button to accept the new minute setting. The clock should return to normal operation, and the colon should flash.

To change to the next MFD function, press the MFD **Mode** button.

Notice The clock will not function if the battery voltage drops below 11.5 volts. The clock will reset to 12:00 if the battery is disconnected.

Multi-Function Display (MFD) Modes and Operation

Instrument Cluster Light Dimmer

"DIM" appears as part of the display when in instrument cluster light dimmer mode. To change the intensity of the instrument cluster light, press the MFD **Set** button to select from six (6) intensity levels. The engine does not need to be running to change the light intensity.

To change to the next MFD function, press the MFD **Mode** button.

Headlamp High Beam Indicator Light Dimmer

"HB" appears as part of the display when in headlamp high beam indicator light dimmer mode. To change the intensity of the headlamp high beam indicator light, press the MFD **Set** button to select from four (4) intensity levels. The engine does not need to be running to change the indicator intensity.

To change to the next MFD function, press the MFD **Mode** button.

Fuel Gauge

The fuel gauge shows the amount of fuel in the fuel tank. The fuel gauge range is from LOW (0.8 gallons/3.03 liters) to FULL (5 gallons/18.9 liters).

To change to the next MFD function, press the MFD **Mode** button.

Voltmeter

When the engine is not running, "BAT" and the battery voltage appear.

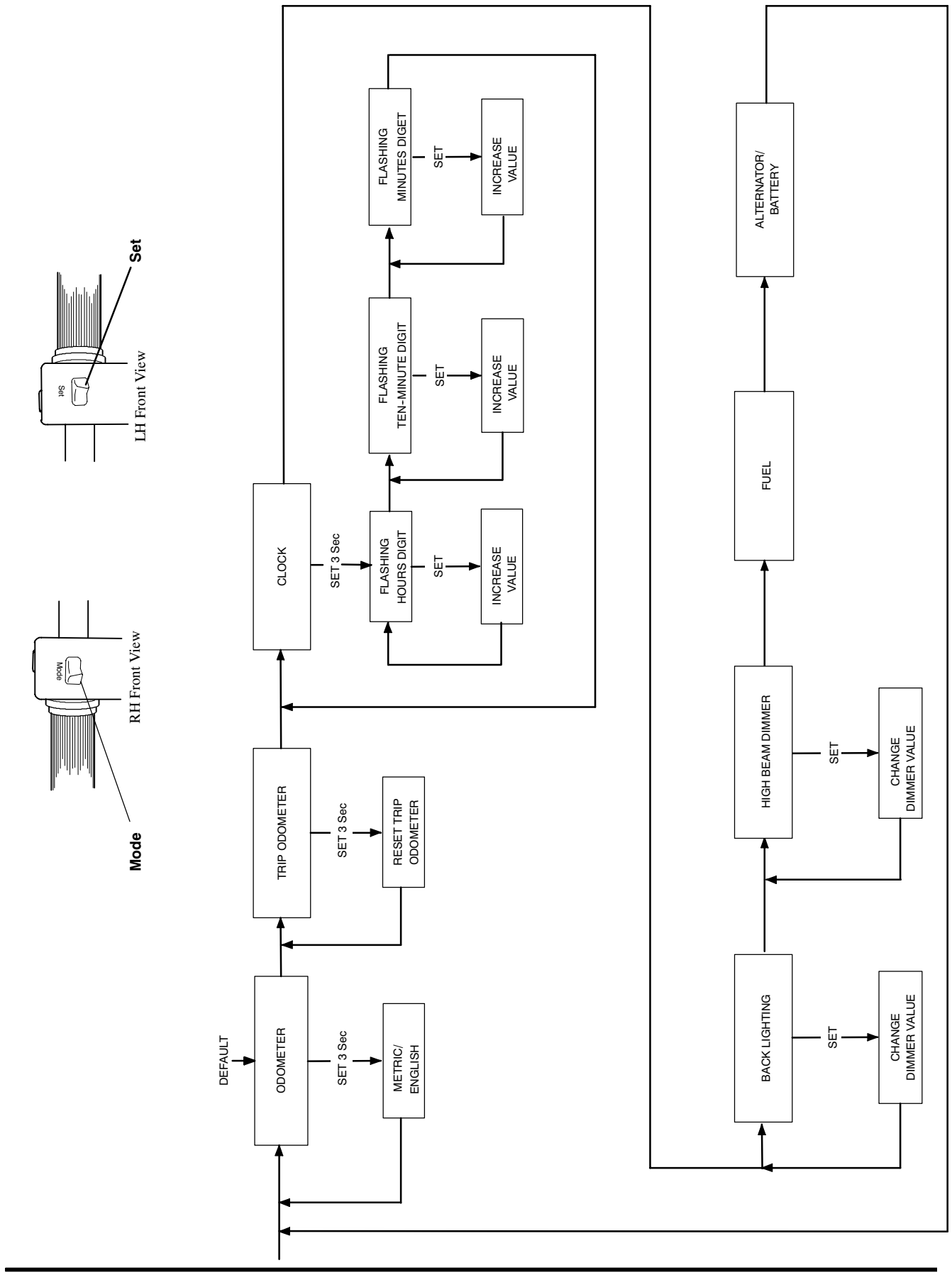
When the engine is running, "ALT" and the charging system voltage appear.

To return to the odometer function, press the MFD **Mode** button.

Check Engine Indicator

The check engine indicator will flash "CH ENG" any time the the ignition switch is in the **On** position and the Engine Control Module sensors report abnormal sensor or engine operation. The check engine indicator will continue to flash as long as the fault condition exists.

MFD FUNCTION FLOW CHART



SPECIAL TOOLS

SPECIAL TOOLS – GENERAL & PRECISION MEASUREMENT	PART NUMBER
Bearing & Seal Driver Set	PV-43558
Blind Bearing Remover Set	Commercially Available
Bore Gauge Set	PV-3017
Decal, Service Bulletin Completion	7170107 (Order from Victory Parts Dept.)
Dial Caliper (Metric, 0–150mm)	PV-26900-7
Dial Caliper (Electronic. English / Metric Conversion)	PV-39776
Dial Indicator (10mm travel)	PV-26900-12
Dial Indicator Stand, Flexible. Magnetic Base	PV-34481
Engine Ear Listening Device	PV-39565
Feeler Gauge Set	PV-26900-8 or PV-26900-9
Outside Micrometer (0-25 & 25-50mm)	PV-3006, PV-3007
Outside Micrometer Set (0-100mm)	PV-3009
Plastigauge®	Commercially Available
Small Hole Gauge Set	Commercially Available
Straight Edge, Precision	PV-34673
Surface Plate	Commercially Available
Telescoping Gauge Set	PU-45423
Torque Wrench (3/8″ Drive in-lb)	PV-43543
Torque Wrench (3/8″ Drive lb-ft)	PV-43552; PV-43564

SPECIAL TOOLS – TUNE UP & MAINTENANCE	PART NUMBER
Belt Tension Gauge	PV-43532
Cylinder Leakdown Tester	PV-35667-A
Compression Gauge Set	PV-33223
Oil Pressure Gauge Set	PV-43531
Oil Filter Wrench	PV-43527
Wheel Alignment Tool	PV-43528

SPECIAL TOOLS – ELECTRICAL	PART NUMBER
Ammeter Inductive Clamp for Fluke 73 Multimeter	PV-39617
Electrical Connector Test Adapter Kit	PV-43526
Flywheel Puller	PV-43533
Inductive Timing Light	PV–43537
Multimeter, Fluke 73™	PV-43546
Speedometer Signal Tester	PV-43544
Speedometer Signal Tester Adaptor (Use with PV-43544 on 2001+ models)	PV-

SPECIAL TOOLS

SPECIAL TOOLS – ENGINE / CLUTCH / TRANS	PART NUMBER
Clutch Hub Holding Tool	PV-43518
Clutch Shaft Holder	PV-45028
Crankcase Assembly Tool (Same as Mainshaft / Crankcase Installer)	PV-46299
Crankshaft Bearing Protector	PV-43504
Crankshaft Rotation Socket (2003-current)	PV-46988
Crankcase Puller (Crankcase Separation) Used on 2001 and later; and on 1999-2000 if transmission kit has been installed)	PV-45029
Crankcase Separating Bolts & Studs (1999-2000 only)	PV-43503
Cylinder Bore Gauge	PV-3017
Engine Hoist or Lift	Commercially Available
Engine Lock Tool	PV-43502-A
Engine Stand	Commercially Available
Flywheel Puller	PV-43533
Mainshaft / Crankcase Installer (Crankcase Assembly)	PV-46299
Moly Assembly Paste	PN 2871460 (Order from Victory Parts Dept.)
Mainshaft (Output Shaft) Seal Installation Tool	PV-43505
Piston Ring Compressor (97mm +)	PV-43570 Pliers, PV-43570 Band (3 5/8¨ to 3 7/8¨)
Split Gear Line-Up Tool	Any 1/4″ shaft: Example: 1/4″ drill bit shank.
Valve Spring Compressor (Adapter)	PV-1253 or PV-4019, (PV-43513-A)

SPECIAL TOOLS STEERING / SUSPENSION	PART NUMBER
Blind Bearing Remover Set	PV-43551
Damper Rod Holder	PV-43517
Fork Seal Driver	PV-43516
Fork Tube Removal / Installation Tool	PV-46196
Steering Bearing; Wheel Bearing; Swing Arm Bushing Removal & Installation Set.	PV-43515
Steering Stem Bearing Adjustment Socket	PV-43508
Steering Stem Bearing Spanner Wrench	PV-43509
Lower Steering Stem Bearing Removal Tool	PV-44683
Shock Pre-Load Adjustment Wrench	PV-43507
Shock Spring Compressor	PV-43571

SPECIAL TOOLS STEERING / SUSPENSION (Cont.)		PART NUMBER
Gas Shock Re-Charging Kit (Includes items below)		2200421
Kit Part	Charging Needle	7052069
Kit Part	Air Chuck	7052068
Kit Part	Gas (Low) Pressure Hose	2110003
Kit Part	Re-Charging Valve	7051004
Kit Part	Female / Male Fitting	7052066
Kit Part	Schrader Valve	7051003
Kit Part	1/8” 3-Way Tee	7052067
Kit Part	1/8” Male Fitting	7052076
Kit Part	High Pressure Regulator	2110005
Shock Shaft Seal Protector (5/8”)		2201640
Shock Rod Holding Tool (5/8”)		2872429
Shock Body Holding Tool		2871071

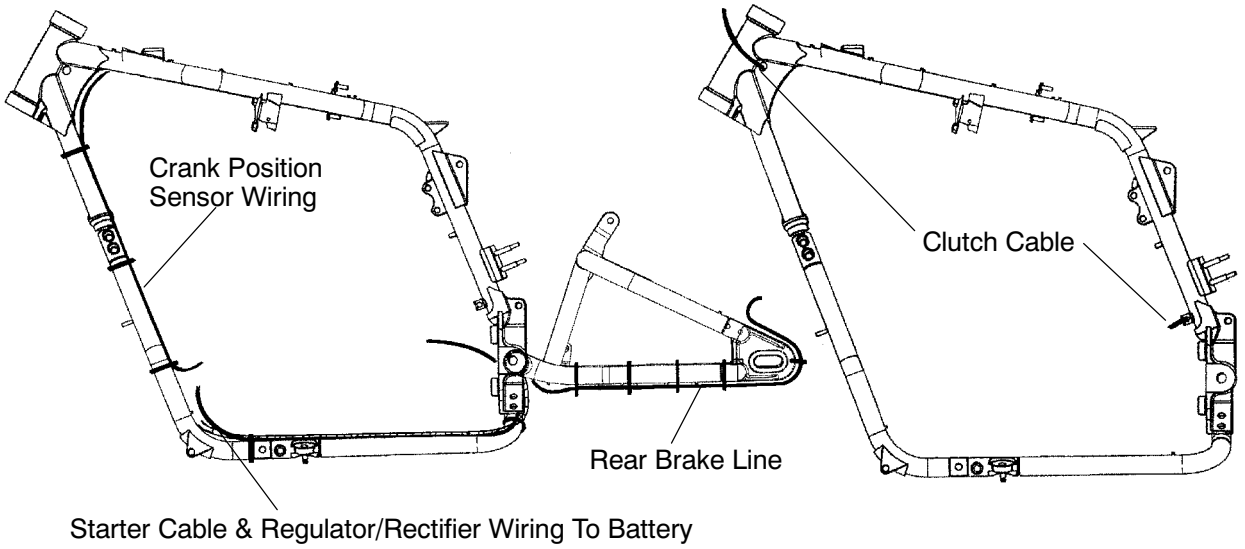
SPECIAL TOOLS – WHEELS/TIRES	PART NUMBER
Air Pressure Gauge	Commercially Available
Bead Breaker (May be part of the tire removal equipment being used)	Commercially Available
Tire Mounting Lubricant	Commercially Available
Tire Removal Equipment	Commercially Available
Rim Protector	PV-43536
Valve Core Remover	Commercially Available
Wheel Balancing/Truing Stand	PV-43556

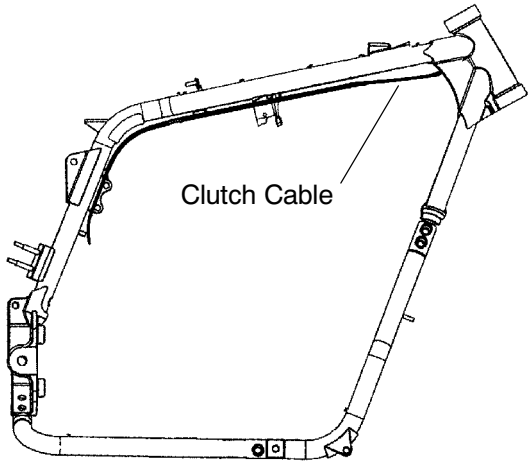
TOOLS – FUEL SYSTEM / FUEL INJECTION	PART NUMBER
Victory / Polaris Diagnostic Tool Kit w/ Diagnostic Software	PV-46085
PV-46085 Kit Contents (The items at right are included in main kit above and can be ordered separately)	Diagnostic Software Disk PV-46085-3 Interface Cable PV-46085-4 Instruction Manual PV-46085-5
PV-45410 Kit Contents (The items at right are included in main kit above and can be ordered separately)	Tube PV-45410-1 O^2 Sensor Cable PV-45410-2 Power Cable PV-45410-3 Instruction Sheet PV-45410-4 O^2 Sensor PV-45410-5
EGA Tool Kit With Lambda Sensor	PV-45410
Fuel Pressure Gauge	PV-43506
Laptop Computer (Refer to diagnostic software user manual for minimum specifications,)	Commercially Available

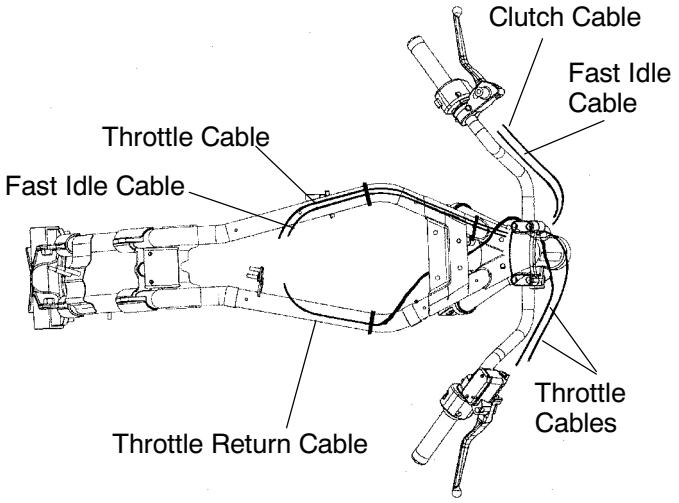
* Order all tools from SPX Corporation at 1-800-328-6657 except where indicated as a Victory order number or as “Commercially Available”. Refer to Victory Special Service Tool Catalog for ordering information.

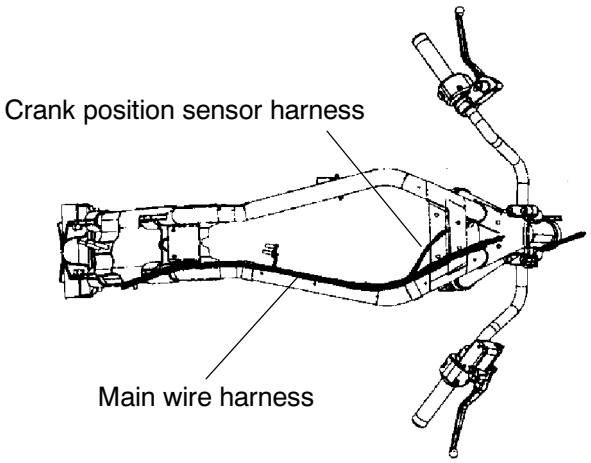
CABLE & HARNESS ROUTING

Refer to following pages for tie strap location

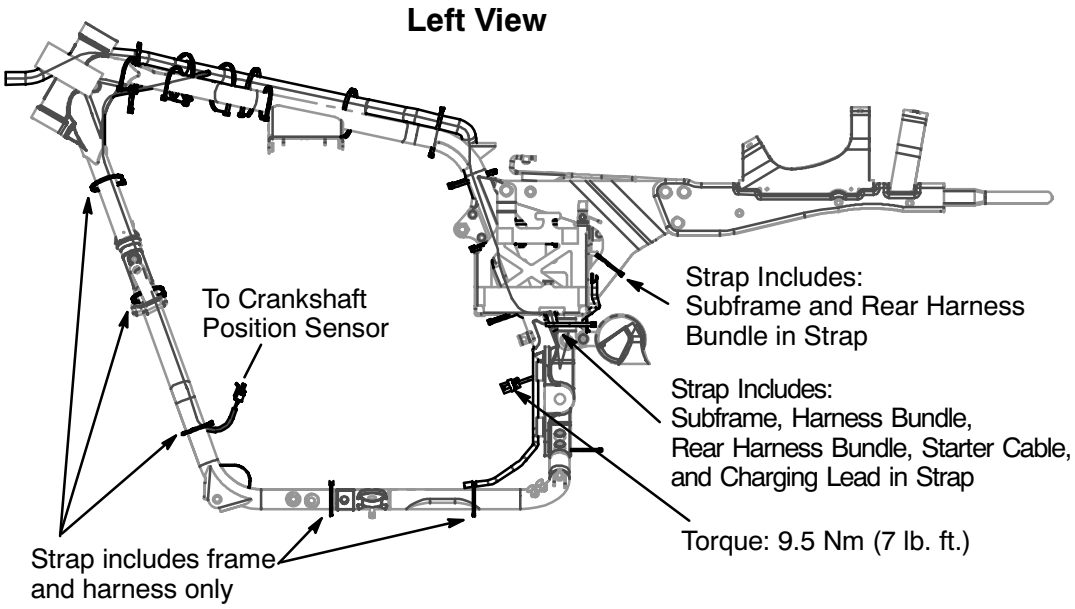


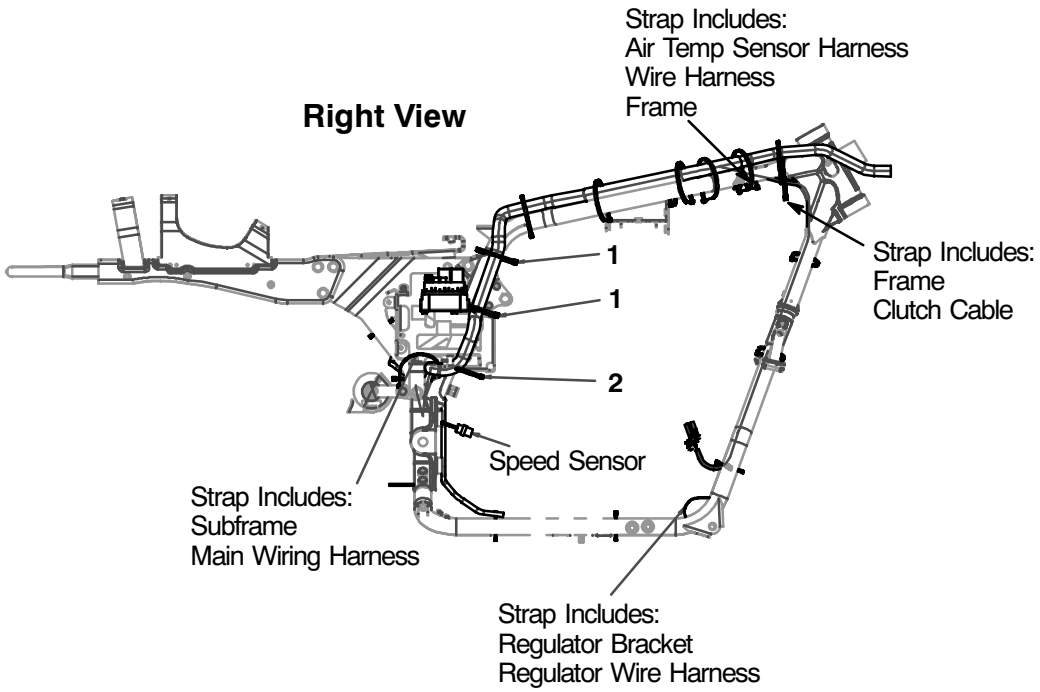






CABLE & HARNESS ROUTING





1 Strap Includes:
Frame & Wiring Harness Only

2 Strap Includes:
Clutch Cable
Speed Sensor Connector

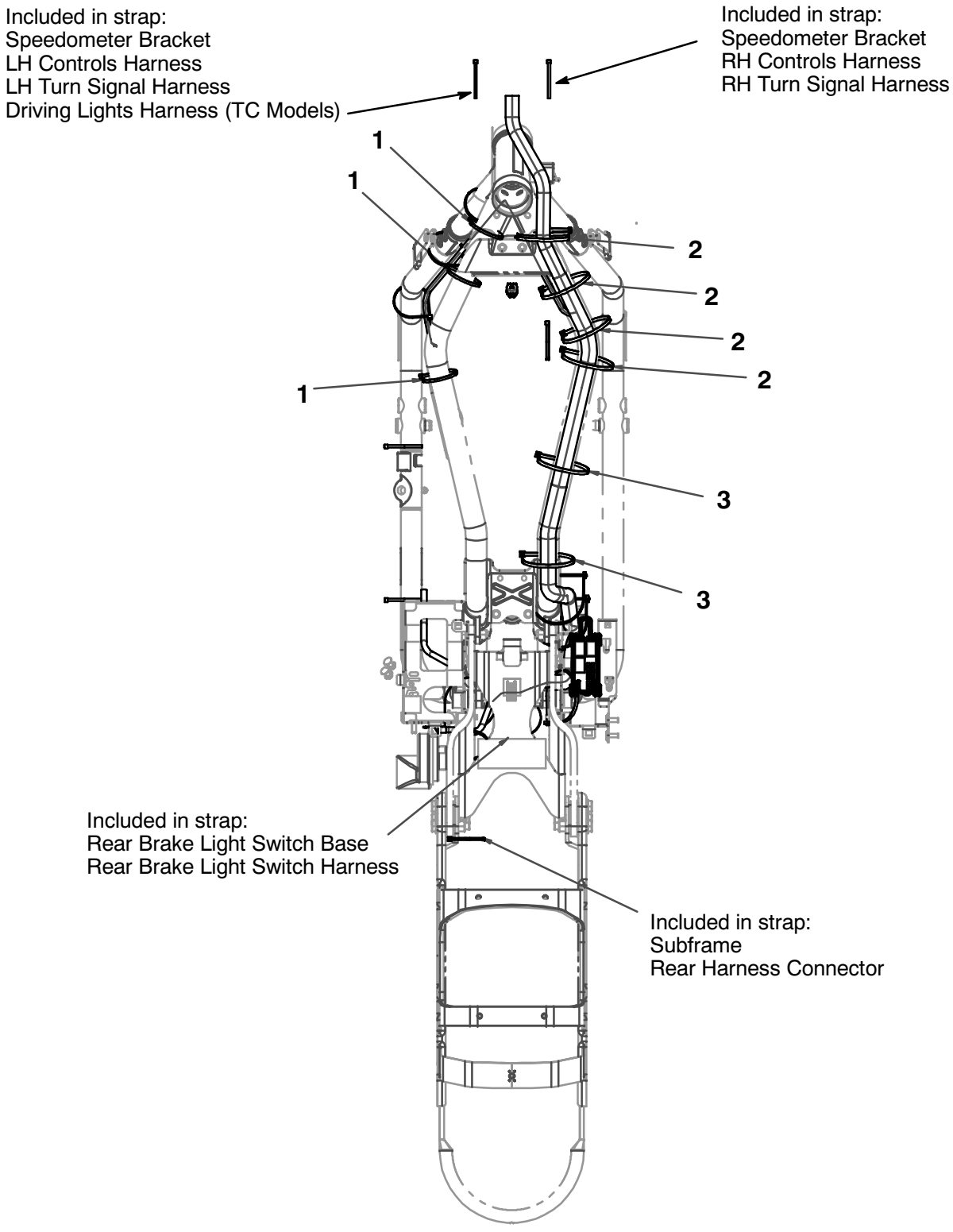
Torque Harness Guide Fasteners to 9.5 Nm (7 lb. ft.)

CABLE & HARNESS ROUTING

[1] Tie Strap includes frame, harness, fast idle cable, and throttle “open” cable only

[2] Tie Strap includes frame, harness, and throttle “close” cable only

[3] Tie Strap includes frame & wire harness only



CHAPTER 2

MAINTENANCE

2

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GENERAL SPECIFICATIONS - 2002

CAPACITIES - SPECIFICATIONS		2002 V92C	2002 V92C Deluxe	2002 V92TC	2002 V92TC Deluxe
	Oil Capacity	6 Qt (5.7 Ltr)	6 Qt (5.7 Ltr)	6 Qt (5.7 Ltr)	6 Qt (5.7 Ltr)
	Fuel Capacity	5 US Gal (19 Ltr)	5 US Gal (19 Ltr)	5 US Gal (19 Ltr)	5 US Gal (19 Ltr)
	Wheelbase	63.3 in (161 cm)	63.3 in (161 cm)	65.5 in (166 cm)	65.5 in (166 cm)
	Seat Height	29.5 in (75 cm)	29.5 in (75 cm)	28.3 in (72 cm)	28.3 in (72 cm)
	Footrest Height	10.6 in (26.9 cm)	10.6 in (26.9 cm)	10.6 in (26.9 cm)	10.6 in (26.9 cm)
	Front Wheel Travel	5.1 in (13 cm)	5.1 in (13 cm)	5.1 in (13 cm)	5.1 in (13 cm)
	Rear Wheel Travel	4 in (10 cm)	4 in (10 cm)	4 in (10 cm)	4 in (10 cm)
	Rear Suspension Type	Single Shock	Single Shock	Single Shock	Single Shock
	Dry Weight	634 lbs (287.6 kg)	669 lbs (303.5 kg)	720 lbs (326.6 kg)	727 lbs (329.8 kg)
	Wet Weight	675 lbs (306.2 kg)	706 lbs (320.2 kg)	759 lbs (344.3 kg)	770 lbs (349.3 kg)
	Overall Length	94 in (239 cm)	94 in (239 cm)	98 in (249 cm)	98 in (249 cm)
	Overall Width	29.5 in (75 cm)	41 in (104 cm)	42 in (107 cm)	42 in (107 cm)
	Overall Height	44.5 (113 cm)	58.5 in (149 cm)	60.8 (154 cm)	60.8 (154 cm)
	Ground Clearance	5.5 in (14 cm)	5.5 in (14 cm)	5 in (13 cm)	5 in (13 cm)
	Passenger Capacity	1	1	1	1
	Maximum Load Capacity	475 lbs (215 kg)	447 (203 kg)	451 (204.5 kg)	440 (199.5 kg)

ENGINE		2002 V92C	2002 V92C Deluxe	2002 V92TC	2002 V92TC Deluxe
	Engine Model Number	MCVT1507D 2002	MCVT1507D 2002	MCVT1507D 2002	MCVT1507D 2002
	Engine Configuration	50° V-Twin	50° V-Twin	50° V-Twin	50° V-Twin
	Engine Displacement	1507cc (92 cubic in)	1507cc (92 cubic in)	1507cc (92 cubic in)	1507cc (92 cubic in)
	Engine Cooling System	Air/Oil Cooling	Air/Oil Cooling	Air/Oil Cooling	Air/Oil Cooling
	Compression Ratio	9:2:1	9:2:1	9:2:1	9:2:1
	Compression	180 psi ± 20 1241 kPa ± 138	180 psi ± 20 1241 kPa ± 138	180 psi ± 20 1241 kPa ± 138	180 psi ± 20 1241 kPa ± 138
	Valves Per Cylinder	4	4	4	4
	Bore x Stroke	97 x 102 mm	97 x 102 mm	97 x 102 mm	97 x 102 mm
	Starter	Direct Drive	Direct Drive	Direct Drive	Direct Drive
	Throttle Body Bore Size	Dual 44 mm	Dual 44 mm	Dual 44 mm	Dual 44 mm
	Exhaust System Type	Staggered Dual	Staggered Dual	Dual Crossover	Dual Crossover
	Lubrication System	Wet Sump	Wet Sump	Wet Sump	Wet Sump
	Engine RPM @ 60 mph	2540	2540	2540	2540
	Spark Plug	NGK CR7EB	NGK CR7EB	NGK CR7EB	NGK CR7EB
	Spark Plug Gap	.032 in (0.8 mm)	.032 in (0.8 mm)	.032 in (0.8 mm)	.032 in (0.8 mm)

GENERAL SPECIFICATIONS - 2002

		2002 V92C	V92C Deluxe	2002 V92TC	V92TC Deluxe
DRIVE SYS	Transmission Type	Manual 5 Speed	Manual 5 Speed	Manual 5 Speed	Manual 5 Speed
	Clutch Type	Wet Multi-Disk Diaphragm Spring	Wet Multi-Disk Diaphragm Spring	Wet Multi-Disk Diaphragm Spring	Wet Multi-Disk Diaphragm Spring
	Primary Drive Reduction	Wet Multi-Gear	Wet Multi-Gear	Wet Multi-Gear	Wet Multi-Gear
	Primary Drive Gear Ratio	1.5:1	1.5:1	1.5:1	1.5:1
TIRES	Front Wheel	Cast 5 spoke 16″ x 3″	Laced 40 Spoke 16 x 3 in	Cast 5 spoke 16″ x 3″	Laced 40 Spoke 16 x 3 in
	Rear Wheel	Cast 5 spoke 16″ x 3″	Laced 40 Spoke 16 x 3.5 in	Cast 5 spoke 16″ x 3″	Laced 40 Spoke 16 x 3.5 in
	Front Tire	Dunlop 491 Elite II MT90B16 71H	Dunlop 491 Elite II MT90 B16 71H (use w/ inner tube)	Dunlop 491 Elite II MT90B16 71H	Dunlop 491 Elite II MT90 B16 71H (use with inner tube)
	Rear Tire	Dunlop D417 160/80 B1675H	Dunlop D417 160/80 B16 75H (use with inner tube)	Dunlop D417 160/80 B1675H	Dunlop D417 160/80 B16 75H (use with inner tube)
	Minimum Tread Depth	.063 in. (1.6mm)	.063 in. (1.6mm)	.063 in. (1.6mm)	.063 in. (1.6mm)
SUSP	Front Type	Conventional Telescopic	Conventional Telescopic	Conventional Telescopic	Conventional Telescopic
	Front Travel (inches)	5.1 in (13 cm)	5.1 in (13 cm)	5.1 in (13 cm)	5.1 in (13 cm)
	Rear Type	Single-Shock	Single-Shock	Single-Shock	Single-Shock
	Rear Travel (inches)	4 in (10 cm)	4 in (10 cm)	4 in (10 cm)	4 in (10 cm)
BRAKES	Brake Type	Disc/Disc	Disc/Disc	Disc/Disc	Disc/Disc
	Front Brake	Single 300 x 5 mm Disc with 4 Piston Fixed Caliper	Single 300 x 5 mm Disc with 4 Piston Fixed Caliper	Dual 300 x 5 mm Disc with 4 Piston Fixed Caliper	Dual 300 x 5 mm Disc with 4 Piston Fixed Caliper
	Rear Brake	Single 300 x 6 mm Disc with 2 Piston Floating Caliper	Single 300 x 6 mm Disc with 2 Piston Floating Caliper	Single 300 x 6 mm Disc with 2 Piston Floating Caliper	Single 300 x 6 mm Disc with 2 Piston Floating Caliper
LIGHTS	Headlight (Intl)	5.5 amps ANSI HG024XV (H4)	5.5 amps ANSI HG024XV (H4)	5.5 amps ANSI HG024XV (H4)	5.5 amps ANSI HG024XV (H4)
	Brake/Tail Light	2.1/1.6 amps ANSI 198	2.1/1.6 amps ANSI 198	2.1/1.6 amps ANSI 198	2.1/1.6 amps ANSI 198
	Turn Signal Light (Front)	2.1 amps ANSI 198	2.1 amps ANSI 198	2.1 amps ANSI 198	2.1 amps ANSI 198
	Turn Signal Light (Rear)	1.6 amps ANSI 199	1.6 amps ANSI 199	1.6 amps ANSI 199	1.6 amps ANSI 199
	Instrument Cluster Lights Backlight Dimming Feature	1.3 amps	1.3 amps	1.3 amps	1.3 amps
	UK Models Front Position Light	ANSI 193	ANSI 193	ANSI 193	ANSI 193
FUSES	Horn/Brake/Headlamp	20 amp fuse	20 amp fuse	20 amp fuse	20 amp fuse
	Flashers	15 amp fuse	15 amp fuse	15 amp fuse	15 amp fuse
	PCM	20 amp fuse	20 amp fuse	20 amp fuse	20 amp fuse
	Fuel Pump	10 amp fuse	10 amp fuse	10 amp fuse	10 amp fuse

GENERAL SPECIFICATIONS 2003-2004

CAPACITIES - SPECIFICATIONS		Classic	Touring Cruiser
	Oil Capacity	6.5 Qt (6.15 Ltr)	6.5 Qt (6.15 Ltr)
	Fuel Capacity	5 US Gal (19 Ltr)	5 US Gal (19 Ltr)
	Wheelbase	63.3 in (161 cm)	65.5 in (166 cm)
	Seat Height	28.3 in (72 cm)	28.3 in (72 cm)
	Footrest Height	10.6 in (26.9 cm)	10.6 in (26.9 cm)
	Front Wheel Travel	5.1 in (13 cm)	5.1 in (13 cm)
	Rear Wheel Travel	4 in (10 cm)	4 in (10 cm)
	Rear Suspension Type	Single Gas Shock; Pre-load Adjustable	Single Gas Shock; Pre-load Adjustable
	Dry Weight	634 lbs (287.6 kg)	720 lbs (326.6 kg)
	Wet Weight	675 lbs (306.2 kg)	759 lbs (344.3 kg)
	Overall Length	94 in (239 cm)	98 in (249 cm)
	Overall Width	29.5 in (75 cm)	42 in (107 cm)
	Overall Height	44.5 (113 cm)	60.8 (154 cm)
	Ground Clearance	5.5 in (14 cm)	5 in (13 cm)
	Passenger Capacity	1	1
	Maximum Load Capacity	444 lbs (201 kg)	441 (200 kg)
	Gross Vehicle Weight Rating (GVWR)	1150 lbs. (522 kg)	1210 lbs. (549 kg)
	Rake / Trail	30.0 Degrees / 4.76 in. (121 mm)	30.0 Degrees / 6.89 in. (175 mm)

ENGINE		Classic	Touring Cruiser
	Engine Model Number	MCVT1507D 2003	MCVT1507D 2003
	Engine Configuration	50° V-Twin	50° V-Twin
	Engine Displacement	1507cc (92 cubic in)	1507cc (92 cubic in)
	Engine Cooling System	Air/Oil Cooling	Air/Oil Cooling
	Compression Ratio	9:2:1	9:2:1
	Compression	180 psi ± 20 1241 kPa ± 138	180 psi ± 20 1241 kPa ± 138
	Valves Per Cylinder	4	4
	Bore x Stroke	97 x 102 mm	97 x 102 mm
	Starter	Direct Drive	Direct Drive
	Throttle Body Bore Size	Dual 44 mm	Dual 44 mm
	Exhaust System Type	Staggered Dual	Dual Crossover
	Lubrication System	Wet Sump	Wet Sump
	Engine RPM @ 60 mph	2540	2540
	Spark Plug Type (Gap)	NGK CR7EB (.032 in. / 0.8 mm)	NGK CR7EB (.032 in. / 0.8 mm)
	Dry Weight	244 lbs. (111 Kg)	244 lbs. (111 Kg)

GENERAL SPECIFICATIONS 2003-2004

		Classic	Touring Cruiser
DRIVE SYS	Transmission Type	Manual 5 Speed Constant Mesh	Manual 5 Speed Constant Mesh
	Clutch Type	Wet Multi-Disk Diaphragm Spring	Wet Multi-Disk Diaphragm Spring
	Primary Drive Reduction	Wet Multi-Gear	Wet Multi-Gear
	Primary Drive Gear Ratio	1.5:1	1.5:1
TIRES	Front Wheel	Cast 5 spoke 16″ x 3″	Cast 5 spoke 16″ x 3″
	Rear Wheel	Cast 5 spoke 16″ x 3″	Cast 5 spoke 16″ x 3″
	Front Tire	Dunlop 491 Elite II MT90B16 71H White Wall: Dunlop CRUISEMAX 130/90-16 67H	Dunlop 491 Elite II MT90B16 71H White Wall: Dunlop CRUISEMAX 130/90-16 67H
	Rear Tire	Dunlop D417 160/80B16 75H White Wall: Dunlop CRUISEMAX 150/80B16 71H	Dunlop D417 160/80B16 75H White Wall: Dunlop CRUISEMAX 150/80B16 71H
	Minimum Tread Depth	.063 in. (1.6mm)	.063 in. (1.6mm)
SUSP	Front Type	Conventional Telescopic	Conventional Telescopic
	Front Travel (inches)	5.1 in (13 cm)	5.1 in (13 cm)
	Rear Type	Single-Shock w/Adjustable Preload	Single-Shock w/ Adjustable Preload
	Rear Travel (inches)	4 in (10 cm)	4 in (10 cm)
BRAKES	Brake Type	Disc/Disc	Disc/Disc
	Front Brake	Single 300 x 5 mm Disc with 4 Piston Fixed Caliper	Dual 300 x 5 mm Discs with 4 Piston Fixed Caliper
	Rear Brake	Single 300 x 6 mm Disc with 2 Piston Floating Caliper	Single 300 x 6 mm Disc with 2 Piston Floating Caliper
LIGHTS	Headlight (Intl)	5.5 amps ANSI HG024XV (H4)	5.5 amps ANSI HG024XV (H4)
	Brake/Tail Light	2.1/1.6 amps ANSI 198	2.1/1.6 amps ANSI 198
	Turn Signal Light (Front)	2.1 amps ANSI 198	2.1 amps ANSI 198
	Turn Signal Light (Rear)	1.6 amps ANSI 199	1.6 amps ANSI 199
	Instrument Cluster Lights Backlight Dimming Feature	1.3 amps	1.3 amps
	UK Models Front Position Light	ANSI 193	ANSI 193
FUSES	Horn/Brake/Headlamp	20 amp fuse	20 amp fuse
	Flashers	15 amp fuse	15 amp fuse
	ECM	20 amp fuse	20 amp fuse
	Fuel Pump	10 amp fuse	10 amp fuse

PERIODIC MAINTENANCE INTERVAL CHART

Component (see operation codes below)	ODOMETER READING in MILES (KILOMETERS)																				
	500 (800)	2,500 (4,000)	5000 (8,000)	7,500 (12,000)	10,000 (16,000)	12.500 (20,000)	15,000 (24,000)	17,500 (28,000)	20,000 (32,000)	22,500 (36,000)	25,000 (40,000)	27,500 (44,000)	30,000 (48,000)	32,500 (52,000)	35,000 (56,000)	37,500 (60,000)	40,000 (64,000)	42,500 (68,000)	45,000 (72,000)	47.500 (76,000)	50,000 (80,000)
Air FIlter	I	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R	I	R
Auxiliary Lights	I		I		I		I		I		I		I		I		I		I		I
Brake Fluid**	I	I	I	I	I	I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	I
Battery	I		I		I		I		I		I		I		I		I		I		I
Brake Pads	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Clutch Lever	I		I		L		I		L		I		L		I		L		I		L
Control Cables	I		I		L		I		L		I		L		I		L		I		L
Crankcase Ventilation System	I		I		I		I		I		I		I		I		I		I		I
Drive Belt	I	I	I	I	I	I	I	I	I	I	I	I	R	I	I	I	I	I	I	I	I
Drive Sprocket and Sprocket Nut							I						I						I		
Engine Oil*	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine Oil Filter*	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Engine Compression	I				I				I				I				I				I
Evaporative Emission Control System (CA. Only)	I		I		I		I		I		I		I		I		I		I		I
Exhaust System	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Fast Idle Lever	I		I		L		I		L		I		L		I		L		I		L
Fasteners	I		I		I		I		I		I		I		I		I		I		I
Front Fork Oil**	I		I		I		R		I		I		R		I		I		R		I
Front Forks and Front Axle	I		I		I		I		I		I		I		I		I		I		I
Front Brake Lever	I		I		L		I		L		I		L		I		L		I		L
Fuel Filter											R										R
Fuel System	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Gear Shift Pedal	I		I		I		I		I		I		I		I		I		I		I
Headlamp	I				I				I				I				I				I
Rear Brake Pedal	I		I		I		I		I		I		I		I		I		I		I
Rear Shock Absorber (All except 2004 Touring Cruiser)	I		I		I		R		I		I		R		I		I		R		I
Rear Shock Absorber* 2004 Touring Cruiser	I		I		I		I		I		I		I		I		I		I		R
Rear Wheel Alignment	I		I		I		I		I		I		I		I		I		I		I
Road Test	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	P
Sidestand	I		I		L		I		L		I		L		I		L		I		L
Spark Plugs	I		I		I		I		I		I		R		I		I		I		I
Steering Bearings	I	I	I	I	I	I	L	I	I	I	I	I	L	I	I	I	I	I	L	I	I
Swing Arm and Rear Axle	I		I		I		I		I		I		I		I		I		I		I
Throttle	I	I	I	I	L	I	I	I	L	I	I	I	L	I	I	I	L	I	I	I	L
Tires	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I	I
Wheel Spokes	I		I		I		I		I		I		I		I		I		I		I

Operation Codes:

I-Inspect (tighten, clean, adjust, correct or replace if necessary) **R**-Replace/Rebuild *Replace at specified interval or annually

L-Lubricate with proper lubricant **P**-Perform **Replace at specified interval or every 2 years

*** Inspect sealed (non-rebuildable) shock on 2004 Touring Cruiser in accordance with chart. Replacement is recommended at 50,000 mile intervals (80,000 Kilometers).**

TUNE UP SPECIFICATIONS

ITEM	SPECIFICATION
Lubrication Oil Pressure @ 3000 rpm	552 kPa (80 psi)
Cooling Oil Pressure @ 3000 rpm	414 kPa (60 psi)
Drive Belt Deflection	All Except Touring Cruiser Models 8 mm (.315″) With 10-12 lb Load @ Center Span Touring Cruiser Models 9 mm (.354″) With 10-12 lb Load @ Center Span
Throttle Grip Freeplay	3-6mm (1/8-1/4″)
Idle Speed	950 RPM ± 50
Fast Idle Speed	2000 RPM ± 100
Fast Idle Lever Freeplay	3-6mm (1/8-1/4″)
Clutch Lever Freeplay	.25-.75mm (.010-.030″)
Spark Plug Type / Gap	**2002-2003** NGK CR7EB / .8mm (.032″) **2004 Touring Cruiser** NGK CPR6EA-9 / .8mm (.032″)

Start the engine and warm it up for several minutes. While warming up, check for oil leaks. If any leaks are found, stop the engine immediately and determine the source of the problem before starting the engine again.

NOTE: After the engine is started, the oil indicator light should go off. If the indicator light flickers or remains on, immediately stop the engine and diagnose the problem before continuing.

TIGHTENING TORQUE	
Drain Plug (Inspect / replace O-ring or sealing washer)	**2002 (22x1.5)** - 38 Nm (28 ft. lbs.) **2003-2004 (12x1.5)** - 27 Nm (20 ft. lbs.)
Oil Filter	3/4 full turn after contacting the sealing surface

OIL TYPE / QUANTITY	
Oil Type	Victory Semi-Synthetic 20W40 Engine Oil
Oil and Filter Change	6.15 liters (6.5 quarts)

Use Victory 20W40 engine oil for all temperatures. If Victory oil is not available, use 20W40 SG or equivalent.

CAUTION

Do not put chemical additives in the oil. Victory motorcycle oil has been specially designed for this application. Additional additives are not necessary and have not been approved by Victory Engineering.

FASTENER TORQUE SPECIFICATIONS, TUNE-UP

DESCRIPTION		TORQUE N-m	TORQUE Lb-ft (Lb-in)	APPLY / NOTES
Air Box to Throttle Body		–	(85)	
Air Box Cover		–	(10)	
Air Filter Cover		–	(10)	
Axle Nut		88	65	
Axle Adjuster Jam Nut		16	12	
Brake Lever Pivot Nut (Front)		7	(60)	
Clutch Lever Pivot Nut		5.5	(48)	
Drive Sprocket Nut		170	125	
Drive Sprocket Nut Retainer Plate Screws		10	(85)	
Exhaust / Muffler		Refer to Chapter 3		
Fuel Tank Mounting Screws		47	35	
Oil Drain Plug	2002	38	28	22x1.5mm
	2003-2004	27	20	12x1.5mm
Oil Filter		3/4 Turn Past Gasket Contact		
Oil Pressure Sensor		–	(50)	Pipe Sealant
Oil Temperature Sensor		–	(50)	Pipe Sealant
Side Stand to Frame		47	35	
Spark Plug		10 – 12	8 – 9	

SPECIAL TOOLS

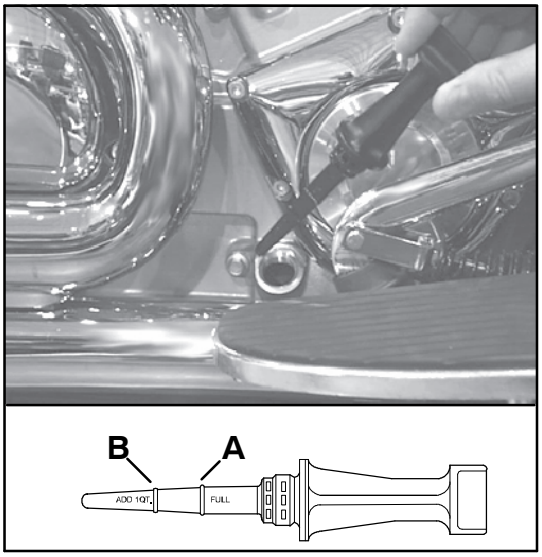
Refer to page 1.11 for special tool information.

MAINTENANCE PRODUCTS

Victory All Purpose Grease:	2872187
Moly Assembly Paste:	2871460
Victory Semi-Synthetic 20W/40:	2872176
Oil Change Kit::	2873551
Victory Cable Lubricant:	2872863
Carbon Clean Fuel Additive:	2872190
Victory DOT 4 Brake Fluid:	2872189
Nyogel™ Di-Electric Grease:	2871329
Victory Detail Kit:	2872195
Victory Restore Kit:	2872192
Loctite 262™ (50cc Tube)	2871951
Primer N™ (25g Aerosol)	2870585
Hand Grip Adhesive (Three Bond 1501) (10ml tube)	2872575
Victory Fork Oil	2872184

ENGINE OIL LEVEL INSPECTION

1. Warm the engine for several minutes until operating temperature is reached.
2. Stop engine and wait for 3-5 minutes.
3. Place the machine on a level area and hold it in an upright position.
4. Remove and clean the oil off of the dipstick.
5. **Screw the dipstick in until seated.**
6. Remove the dipstick and read the oil level. The oil level should be up to the full line (A) on the dipstick. If the oil level is low (B), add the recommended oil to raise the level to the full mark.



ENGINE OIL & FILTER CHANGE

Oil Change Kit: P/N 2873551

Change engine oil and filter with the motorcycle on its side stand, engine warm.

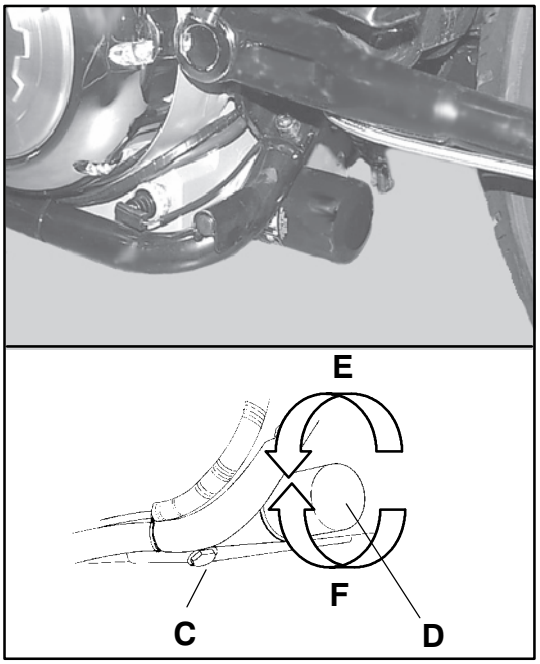
⚠ WARNING

HOT COMPONENTS Wear insulated gloves and/or allow engine and exhaust to cool before handling these parts.

1. Remove the oil drain plug (C) (socket head allen screw) and drain the engine oil completely into a suitable container.
2. Discard drain plug sealing washer.
3. Remove oil filter (D) by turning counter clockwise (E). Be sure sealing ring is removed with filter.

Oil Filter Wrench: Strap Wrench

4. Allow oil to drain completely.
5. Install oil drain plug with new sealing washer. Lubricate with engine oil and install drain plug. Torque drain plug to specification.

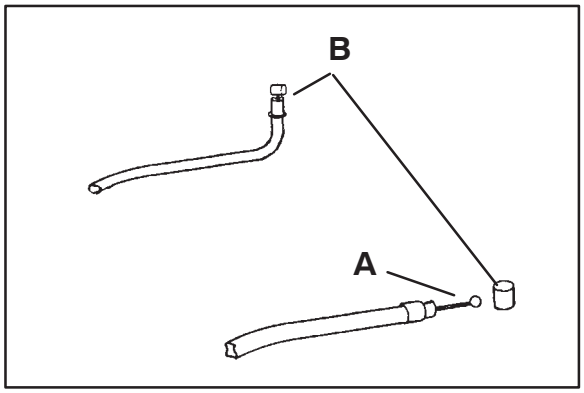


TORQUE: Oil Drain Plug
2002 - 38 Nm (28 lb-ft)
2003-2004 - 27 Nm (20 lb-ft)

TORQUE: Oil Filter
3/4 turn after sealing ring contacts crankcase

6. Clean any residue or debris from the oil filter sealing area and threads. Apply oil to new oil filter sealing ring and threads. Install oil filter and tighten (F) 3/4 of a turn after sealing ring contacts crankcase.
7. Fill crankcase to capacity with the recommended oil and reinstall dipstick.
8. Start engine and run until operating temperature is reached. Stop engine and wait 3-5 minutes before checking oil level.

CABLE LUBRICATION

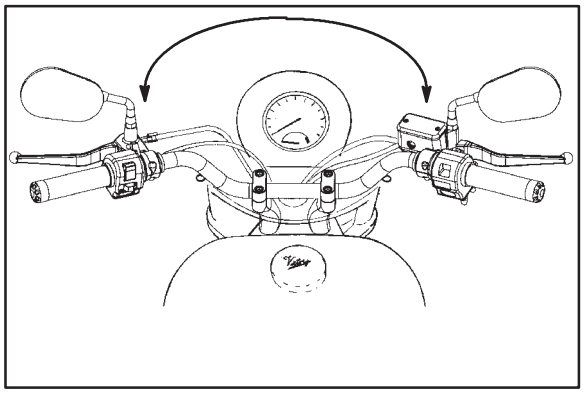


The cables used on the motorcycle require periodic lubrication for smooth operation and longevity.

Inspect cables for smooth movement and external damage. Inspect the exposed inner cable (A) for fraying, damage or rust. Replace any damaged cables.

Disconnect one end of the cable to be lubricated. Use Victory Cable Lubricant or a commercially available cable lubricant. The end of the cable (B) should also be lubricated at this time with Victory all purpose grease.

- Throttle cable.
- Clutch cable.
- Fast idle cable.
- Seat release cable.



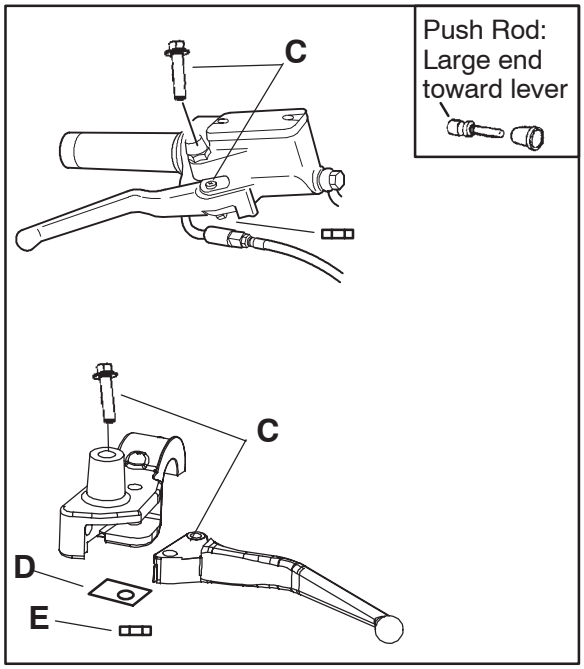
Victory All Purpose Grease: 2872187

CONTROL LEVER PIVOT LUBRICATION

Lubricate brake lever and clutch lever pivot points at intervals listed on periodic maintenance chart.

1. Remove right side mirtror, brake lever pivot nut and pin.
2. Remove clutch and brake levers and clean old lubricant and dirt from pivot bolt, lever and housing.
3. Lubricate areas (C) with Victory All Purpose Grease on both clutch lever and brake lever.
4. If removed, install brake master cylinder push rod with large radius oriented toward lever, and small radius toward master cylinder.
5. Reinstall brake lever, lever pivot pin, and nut.
6. Torque lever pivot pin first, using a 4mm hex socket.
7. Hold the pivot pin stationary and torque nut using a 10mm socket to specification below.
8. Check front brake lever movement.
9. Front brake lever is self-adjusting. Refer to page 2.10 to inspect freeplay.
10. Install and adjust RH mirror.
11. Reinstall the clutch lever, lever pivot pin, and nut.
12. Torque clutch lever nut to specification above.
13. Adjust clutch lever freeplay as shown on page 2.13.

TORQUE:
Brake and Clutch Lever Pivot Pin and Nut:
5 ft-lbs (52 inch-pounds) (6 Nm)



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